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10/786,279	02/24/2004	Mark Banister	MEDIPAC 0402	2485
27667	7590	11/09/2010	EXAMINER	
HAYES SOLOWAY P.C. 3450 E. SUNRISE DRIVE, SUITE 140 TUCSON, AZ 85718			BARTON, JEFFREY THOMAS	
		ART UNIT	PAPER NUMBER	
		1728		
		NOTIFICATION DATE		DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 10/786,279	Applicant(s) BANISTER, MARK
	Examiner Jeffrey T. Barton	Art Unit 1728

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If no period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 27 August 2010.

2a) This action is FINAL. 2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1,5-11,14-33,36 and 37 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) Claim(s) _____ is/are allowed.

6) Claim(s) 1,5-11,14-33,36 and 37 is/are rejected.

7) Claim(s) _____ is/are objected to.

8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) Notice of References Cited (PTO-892)
 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
 3) Information Disclosure Statement(s) (PTO/SB/06)
 Paper No(s)/Mail Date _____

4) Interview Summary (PTO-413)
 Paper No(s)/Mail Date _____

5) Notice of Informal Patent Application
 6) Other: _____

DETAILED ACTION

Response to Amendment

1. The amendment filed on 27 August 2010 does not place the application in condition for allowance.

Status of Rejections Pending Since the Office Action of 4 August 2010

2. All rejections are maintained.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 1, 5-11, 14-33, 36, and 37 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

In claim 1 at lines 8-9, there is no support for the limitation "and wherein the battery layer is preformed and adhered to the photovoltaic layer". No description of such manufacture is provided in the specification as originally filed.

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Claims 5-11, 14-33, 36, and 37 depend from claim 1 and therefore include all limitations thereof. These claims are rejected on the same grounds.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

7. Claims 1, 5-11, 14-33, 36, and 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Murasko et al (US 2002/0159245; hereinafter Murasko '245) in view of Yamamura (JP 62-106671 with English Abstract), Murasko (US 2001/0035716; hereinafter Murasko '716), Murasko (US 6,203,391; hereinafter Murasko '391), Curtin (US 6,160,215), and Kakinote et al (JP 59-217991; full translation provided)

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Regarding claim 1, Murasko '245 teaches a fully contained solar powered laminated electrical tape illuminated device comprising stacked layers including a substrate 202 that can be plastic; a photocell 208 (i.e., a photovoltaic that is illuminated by the sun); a device 204, such as a thin film battery, for storing electricity produced by the photocell 208; a source of illumination 206; electrical circuitry 214 for connecting the components; and, as a protective surface, a light transmissive, electrically insulating material (see paragraphs 0023 to 0025). This laminated system reads on a "tape" in that Murasko '245 discloses adhesive backing for these devices. (Paragraph 0028) Note also that Murasko '245 teaches that the electroluminescent devices of Murasko '716 and Murasko '391 are suitable for use within their devices. (Paragraph 0030) The electrical circuit is disclosed as including light sensing switches that provide for selectively charging the battery and/or charging the battery and powering the illuminator. (Paragraph 0027)

Regarding claim 6, the substrate required in the structure of Murasko '245 inherently has a finite thermal conductivity, and will dissipate heat at a corresponding rate. The structure inherently meets the limitations of this claim.

Regarding claims 7-9, Murasko '245 discloses light-sensing switches (Paragraph 0027), which sense ambient light levels, and actuate a switch operable to turn the lamp on or off. Such switches read on the claims.

Regarding claim 11, it is the Examiner's position that the electrical circuitry in the device of Murasko '245 inherently prevents electric current drain through the photocell.

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Regarding claim 14, Murasko '245 discloses a transparent front electrode of the EL lamp. (Paragraph 0027)

Regarding claim 15, Murasko '245 discloses transparent non-electrical layers. (Paragraph 0025, "light-transmissive" coatings)

Regarding claim 17, the electroluminescent lamp of Murasko '245 emits electromagnetic radiation having a frequency, which reads on the claim.

Regarding claims 18-21 and 36, Murasko '245 discloses the electroluminescent lamp comprising an organic light emitting diode. (Paragraph 0021)

Regarding claims 23 and 24, a metallic substrate, as disclosed in paragraph 0025 of Murasko '245 would be reflective, and oriented to reflect light through the opposite surface of the device.

Regarding claims 25 and 26, the organic polymers listed in paragraph 0021 are fluorescent and luminescent.

Regarding claim 27, insulating substrates are dielectric (Paragraph 0025).

Regarding claim 30, leads 214 (Paragraph 0027) are electrodes on the electroluminescent device, contacts to the power supply, and connection between both, meeting the limitations of the claim.

Regarding claim 33, Murasko '245 discloses using plural devices to provide a signal. (Paragraph 0028)

Relevant to claims 5, 10, 31, and 32, Murasko '245 teaches using the laminated devices for signs, billboards, or other illuminated designs or images. (Paragraph 0028) In a different embodiment, the reference also teaches signal

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receivers/transmitters as claimed (Paragraph 0036; microprocessor control) and a second EL lamp connected to the power supply, which can be illuminated at different times than the first lamp. (Paragraph 0037) Such a second lamp requires a separate, alternative power outlet (i.e. from battery) and inlet (i.e. to second EL lamp) as required by claim 5.

Murasko '245 also teaches using an adhesive on the protective surface or base sealing layer to affix the devices onto surfaces. (Paragraph 0028)

Regarding claim 1, Murasko et al do not explicitly teach a removable covering over the adhesive, specifically flexible components and device as claimed, the thin film solar cell overlying the thin film battery, or the device having the claimed order of layers. Regarding claim 16, Murasko et al do not teach a clear adhesive. Within the cited embodiment of Figure 2, Murasko et al does not explicitly disclose an alternative power inlet and outlet as claimed in claim 5, the transmitters and receivers claimed in claim 10, or the edge to edge assembly/lamination required by claims 31 and 32.

Curtin teaches providing solar cells having an adhesive layer over an outer protective surface, and a removable backing over a clear adhesive layer that allows the cell to be affixed to any desired substrate. (Figure 6; Abstract; Column 4, lines 16-19)

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Murasko '716 teaches an electroluminescent device that is flexible.

(Paragraph 0030) And Murasko '391 specifically discloses flexible substrates for EL devices. (Column 1, lines 15-17; Column 2, lines 57-63)

Yamamura et al teaches reduction in the number of parts of a laminated solar battery device and simplified assembly achieved by disposing a charge storage device (Capacitor) on the non-light receiving surface of a thin-film solar cell assembly. (Constitution section of Abstract; Figure 1)

Kakinote et al is cited for teaching a conventional configuration of a solar powered illumination device. Kakinote et al provides a translucent illuminator (7) overlying the thin-film photovoltaic layer (11) and other underlying layers, with the translucent illuminator positioned adjacent transparent protective layer 1.

(Figures 1 and 2; provided partial translation)

Regarding claim 1, it would have been obvious to one having ordinary skill in the art to modify the device of Murasko '245 by including a removable backing on the adhesive layer, as taught by Curtin, because a skilled artisan would have recognized the advantage of such a backing in that it allows easier handling of the devices prior to affixing on a surface. (i.e. no adhesion until desired, no need to apply an adhesive immediately prior to mounting)

Furthermore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to further modify the device of Murasko '245 by disposing the thin film charge storage device on the non-light receiving surface of the thin film solar cell, as taught by Yamamura, because Yamamura

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teaches that such a design reduces the number of parts required and simplifies the assembly of the device. (Purpose section)

In addition, as to the claimed order of layers, Kakinote et al demonstrate that it is conventional to position the illuminator layer (7) on the light-receiving side of the photovoltaic cell between the cell (11) and the protective layer (1). Selection of such a known configuration of layers in a solar-powered illumination device amounts to a matter of design choice, obvious to one having ordinary skill in the art. Only the expected result of a functioning illumination device would have resulted from the combination, and full expectation of success would be present in the combination, as the references are concerned with solar powered illumination devices. The teachings of Yamamura et al and Kakinote et al demonstrate the obviousness of selecting the instantly claimed sequence of layers.

Furthermore it would have been obvious to one having ordinary skill in the art at the time the invention was made to further modify the device of Murasko '245 by selecting a flexible electroluminescent device of Murasko '716 and flexible substrates taught by Murasko '391, because Murasko '245 suggests using the electroluminescent devices of Murasko '716 and Murasko '391 for this purpose (Paragraph 0030), and selection from among known flexible substrate materials for electroluminescent devices would have been obvious to one having ordinary skill in the art.

The new limitation "wherein the battery layer is preformed and adhered to the photovoltaic layer" is drawn to the formation of the instant product by a

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specified process, and does not explicitly provide further structural limitation to the claim. “[E]ven though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process.” *In re Thorpe*, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985) There is no apparent difference between the structure defined by the instant claim and that taught by the prior art as applied above.

Based on the teachings of the prior art as applied above, all claim limitations are taught, except for explicit teachings of flexibility in the respective photovoltaic, battery, and circuitry, and overall device. It is the Examiner's position that thin film semiconductor, metal, and dielectric films that form the thin film photovoltaic and battery layers and leads 214 are "flexible", inasmuch as none of these materials has sufficient thickness to impart rigidity when disposed on a flexible substrate. The overall laminated structure will be flexible when disposed on a flexible substrate.

Specific to claim 16, it would also have been obvious to one having ordinary skill in the art to use a clear adhesive, as taught by Curtin, because it would allow adhesion of the device on the interior side of windows and the like, increasing the protection of the devices from damage while still allowing light to reach the solar cell and the light from the EL lamps to be visible from the exterior.

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Regarding claim 5, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the device of the embodiment of Figure 2 of Murasko '245 by connecting a second lamp to a battery, as taught in Paragraph 0037 of Murasko '245, because it would increase the illumination provided by the system and enable a wider variety of display designs powered by a single cell/battery unit. Such a system would have lower manufacturing costs than two lamps powered by separate cell/battery units, providing additional motivation for such an arrangement.

Regarding claim 10, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the device of the embodiment of Figure 2 of Murasko '245 by using a computer to control the illumination performed by the system, because this would enable desirable complex illumination patterns, such as those described in paragraph 0036, for creative and attractive displays.

Regarding claim 22, any material that transmits light and has a refractive index other than 1 reads on this claim. The polyester film substrate of Murasko '391 meets the limitation.

Regarding claim 28, conventional polyester film substrates, as used by Murasko '391, are smooth.

Regarding claim 29, the device as claimed includes the removable backing, which is at an exterior surface. Curtin teaches a paper backing (Column 4, lines 7-16), and paper is textured.

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Regarding claims 31 and 32, it would have been obvious to one having ordinary skill in the art at the time the invention was made to place plural adhesive devices of the embodiment of Figure 2 of Murasko '245 adjacent each other in making a sign, billboard or other display design, depending on what shape or design is desired. Adjacent placement of these devices reads on the limitations of these claims.

Regarding claim 37, this claim is directed to formation of the claimed product by a specified process, and does not further limit the claimed structure. “[E]ven though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process.” *In re Thorpe*, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985) As there is no evident structural difference between the structure of the prior art and that claimed, the claim is rejected on the same grounds as claim 1.

Response to Arguments

8. Applicant's arguments filed 16 November 2009 have been fully considered but they are not persuasive.

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The examiner apologizes for the delay in providing the translation of the Kakinote et al reference (JP 59-217991). A copy of the translation is attached. The reference is relied upon for the same reasons as in previous Office Actions.

Applicant's arguments provide summaries of each individual reference, noting what the reference lacks relative to the instant claims. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Applicant further argues that combination of Yamamura with Murasko et al. fails to meet the instant limitations requiring a preformed battery adhered to the cell, or the claimed stacked order of layers. The Examiner responds that the new limitations fail to find adequate support in the original specification and furthermore, such product by process limitations do not clearly provide any additional structural limitation. Yamamura teaches positioning of the charge storage device on the non-light receiving surface of the cell, as cited in the rejection, and modification of Murasko et al. to rearrange the parts based on the advantage taught by Yamamura is considered to have been obvious.

Applicant's further arguments concerning the lack of specific teaching of the instant order of stacked layers in each of the individual cited references fail to address the reasons given for positioning the respective layers in the claimed order, given in detail in the rejection above. The stacked order is provided by the

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teachings, with proper motivation for each modification to the base reference. It is not required that any single reference provides the claimed stacked order.

Conclusion

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffrey T. Barton whose telephone number is (571)272-1307. The examiner can normally be reached on M-F 9:00AM - 5:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jennifer K. Michener can be reached on (571) 272-1424.

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The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Jeffrey T. Barton/
Primary Examiner, Art Unit 1728
5 November 2010